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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/681,156	10/09/2003	Mitsunori Miki	2927-0155P	6433

2292 7590 12/11/2006

BIRCH STEWART KOLASCH & BIRCH
PO BOX 747
FALLS CHURCH, VA 22040-0747

EXAMINER	
PATEL, JAYESH A	

ART UNIT	PAPER NUMBER
2635	

DATE MAILED: 12/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/681,156	MIKI ET AL.	
	Examiner	Art Unit	
	Jayesh A. Patel	2635	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *24 August 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-8* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-8* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *09 October 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *10/09/2003*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Preliminary Amendment

1. Applicant's preliminary amendment filed on October 09,2003 regarding the amendments to the specification is considered.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and In *re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.
Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-8 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-15 of U.S. Patent No. US 7062082. and Claims 1-9 of the co-pending application 10/453526 . Although the

conflicting claims are not identical, they are not patentably distinct from each other because the US 7062082, Co-pending application 10/453526 and the application 10/681156. are from the same field of endeavor and analogous art. Also they both are trying to solve the same problem. All the claims in the US 7062082 and 10/453526 are directed to a method and apparatus of measuring the rotation of the sphere and the current application 10/681156 also has claims directed to finding the rotational and flight characteristics of the sphere (ball). Both US 7062082, 10/453526 and the application 10/681156 have the apparatus and methods directed to find the rotational characteristics of the ball by using genetic algorithms.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-8 are rejected under 35 U.S.C. 102(b) as being anticipated by Ohshima et. al. (US 6226416) hereafter Ohshima.

1. Regarding Claim 1,5,6 and 7, Ohshima discloses, a method and an apparatus of measuring rotational and flight characteristics of a sphere in **(Fig 1,2,3,4,5a, 5b and 6)**, comprising the steps of: photographing said sphere **(2 in Fig 1)**, at

predetermined intervals, having a plurality of marks **(Q and P in Fig 3)** given to a surface thereof while said sphere is rotating to obtain a plurality of two-dimensional images of said sphere; generating an imaginary sphere , having a plurality of marks given to a surface thereof, formed at coordinates of a three-dimensional space of a computer screen; and setting an arbitrary posture of said imaginary sphere and an arbitrary position thereof as a reference posture and a reference position respectively ; deriving a relationship between three-dimensional coordinates and two-dimensional coordinates by using at least one photographing means at **(Col 2 Lines 38 –64)** and converting positions of said marks given to said surface of said imaginary sphere formed at said coordinates in said three-dimensional space into positions on a two-dimensional image by using said relationship to find coordinate values of two-dimensional imaginary marks and find coordinate values of said marks present on said two-dimensional images of said sphere at **(Col 3, Lines 1-47)**; performing an operation of displacing a posture of said imaginary sphere relative to said reference posture and said reference position in such a way that said coordinate values of said two-dimensional imaginary marks and said coordinate values of said marks present on said two-dimensional images of said sphere are coincident with each other to specify a three-dimensional posture of said sphere and a three-dimensional position thereof for each of said two-dimensional images of said sphere, according to an amount of said posture displacement operation at **(Fig 3, 4 and Col 3, Lines 39-47)** and computing said rotational and flight characteristics of

said sphere, according to said three-dimensional posture and position of said sphere specified for each of said two-dimensional images of said sphere at one time and said three-dimensional posture and position thereof at another time in the **Arithmetic unit (4) and in Col 3-7**.

2. Regarding Claim 2 and 3, Ohshima discloses, a method according to claim 1, wherein at least six three-dimensional coordinates are used in deriving said relationship between said three-dimensional coordinates and said two-dimensional coordinate In **(Table 1, Figs 5a and 5b, Col 5 Lines 39-67, Col 6 Lines 1-67 and Col 7 Lines 1-11)**.

3. Regarding Claim 4, Ohshima discloses, a method according to claim 1, wherein said posture displacement operation means an operation of moving and rotating said imaginary sphere; and an amount of said posture displacement operation relative to said reference posture and said reference position is found by computations based on an optimization method called genetic algorithm in **Fig 4** and the calculations are performed in the **arithmetic unit (4)**.

4. Regarding Claim 8 see the explanation of Claims 1,6 and also **(Col 2 Lines 23 –43 and Col 7 Lines 10-22)**.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jayesh A. Patel whose telephone number is 571-270-1227. The examiner can normally be reached on M-F 7.00am to 4.30 pm (5-4-9). If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marvin M. Lateef can be reached on 571-272-5026. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Jayesh Patel
12/07/06

MARVIN LATEEF
SUPERVISORY PATENT EXAMINER